

The Drawing

The drawing appears to be acceptable.

Background

Claims 40-42, except for informalities that are easily corrected, have been found by the Examiner to contain allowable subject matter. That subject matter is a silicon resistor, an overlying field plate, and electrical conductors on the field plate. The feature the Examiner finds to have patentable merit is that the contact window for interconnecting the field plate is registered with (overlies) the contact window where the field plate connects to the underlying resistor. That feature is useful, since it allows the same mask or essentially the same mask registration step, to be used to form both windows.

However, an examination of Fig. 16 for instance, makes evident the fact that although element 74 overlies element 46 in this embodiment, it clearly does not matter, in terms of the functionality of the device, where on the field plate the contact window 74 is formed. Accordingly, applicants believe they are entitled to broader claims than claims 40-42.

The remaining claims stand rejected as unpatentable over the combination of Kondo in view of Nelson et al.

In applicant's last response, the main argument put forth against the rejection of Kondo in view of Nelson et al. was that the combination did not have a logical rationale. The argument was advanced that the combination of the Kondo patent and the Nelson et al. patent found no basis in either patent and that the two

patents are directed to different kinds of devices.

Applicants point out that there is an obvious typographical mistake in their last response. The element referred to as 41 should have been 46. The element is described as a field plate, and it is obvious from the Nelson et al. patent that their element 41 is a contact window and that element 46 is a field plate.

With that correction in mind, applicants went on to urge that the device described by Nelson et al. is a pinch-off resistor. The reason for incorporating element 46, a field plate, in the Nelson et al. patent is to achieve the pinch-off function. Absent the need for a pinch-off function, which is the case for both the device of Kondo and the device of applicants, the inclusion of a pinch-off element would be useless and clearly not obvious. Therefore there would be no logical basis for having the field plate 46 of the pinch-off device in the Kondo device.

The simple facts are that the Kondo patent says nothing whatever about pinch-off resistors. And the Nelson et al. patent has nothing to do with field-plated resistors. The mere existence of a contact between an MOS gate electrode and a substrate, as in Nelson et al., is meaningless in the context of applicants' invention. Such contact structures are notorious in the MOS art. The field plate in a field-plated resistor is not an MOS element. There is no correspondence between element 46 in the Nelson et al. patent, and the field plates in either the Kondo patent or in applicants' resistor. As described by Nelson et al., and shown in Fig. 9 of their patent, the MOS gate element 46 is intended to form a depletion layer 52 in the substrate of the device. The depletion layer is an MOS element specific to pinch-off transistors. It is not an element of a standard silicon resistor

as described by Kondo or by applicants.

Note specifically the language at line 23 et seq. of col. 3 in the Nelson et al. patent.

“In addition, the lead structure 46 is of such size that it covers the entire P-type region and extends outwardly beyond the same to serve as a field plate to enlarge the depletion region as hereinafter described.”

Neither applicant's device, nor Kondo's device, has a depletion region. Nor does either have a P-type region. Thus the whole reason for including the field plate 46 in the Nelson et al. device is absent in the Kondo device.

Having put forth this argument in some detail, namely the fundamental flaw in the combination of Kondo and Nelson et al., and a clear challenge to the rationale of that combination, the final rejection is completely silent about applicant's main argument. Nor is there any attempt to provide a rationale for the combination.

Since the entire rejection is based on a theory for which no support exists in this record, the rejection clearly cannot be sustained.

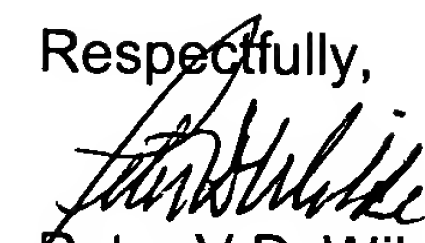
In view of these remarks, reconsideration and allowance of claims 28-30, and 32-42 is requested.

In the event that the Examiner concludes that a telephone call would advance the prosecution of this application, the Examiner is invited and encouraged to call the undersigned attorney at Area Code 757-258-9018.

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Respectfully,


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